

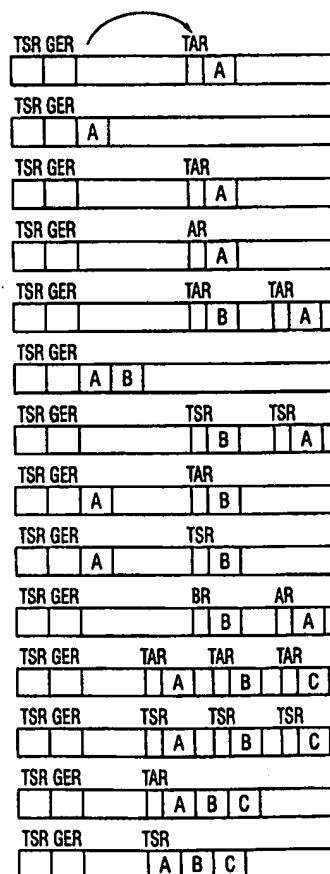


## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <b>(21) International Application Number:</b> PCT/EP98/07380   <b>(22) International Filing Date:</b> 17 November 1998 (17.11.98)   <b>(30) Priority Data:</b>            08/974,391                      19 November 1997 (19.11.97)      US   <b>(71) Applicant (for all designated States except AT US):</b> NOVARTIS AG [CH/CH]; Schwarzwaldallee 215, CH-4058 Basel (CH).   <b>(71) Applicant (for AT only):</b> NOVARTIS-ERFINDUNGEN VERWALTUNGSGESELLSCHAFT MBH [AT/AT]; Brunner Strasse 59, A-1235 Vienna (AT).   <b>(72) Inventors; and</b>  <b>(75) Inventors/Applicants (for US only):</b> CHANG, Yung-Nien [US/US]; 11 Watkins Glen Court, Cockeysville, MD 21030 (US). HALLENBECK, Paul, L. [US/US]; 7461 Rosewood Manor Lane, Gaithersburg, MD 20882 (US). HAY, Carl, M. [US/US]; 28301 Honeysuckle Drive, Damascus, MD 20872 (US). STEWART, David, A. [US/US]; 6023 Kennard Court, Eldersburg, MD 21784 (US).   <b>(74) Agent:</b> BECKER, Konrad; Novartis AG, Patent- und Markenabteilung, Lichtstrasse 35, CH-4002 Basel (CH).         </div> <div style="width: 48%;"> <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).   <b>Published</b>  <i>With international search report.</i>  <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> </div> </div>		

**(54) Title:** VECTOR FOR TISSUE-SPECIFIC REPLICATION AND GENE EXPRESSION**(57) Abstract**

The invention generally relates to cell-specific expression vectors. It particularly relates to targeted gene therapy using recombinant expression vectors and particularly adenovirus vectors. The invention specifically relates to replication-conditional expression vectors and methods for using them. Such vectors are able to selectively replicate in a target cell or tissue to provide a therapeutic benefit in a tissue from the presence of the vector per se or from one or more heterologous gene products expressed from the vector and distributed throughout the tissue.



TSR = tissue specific regulatory sequence  
 GER = gene essential for replication  
 TAR = transactivatable regulatory sequence  
 AR, BR etc. = homologous promoter of gene A, B, etc.

etc.